

Work Order ID 81974

March-21-12 1:52:30 PM

\*81974\*

Page 1

Item ID: D2646

Revision ID:

Item Name: Aft Cap

Start Date: 21/03/2012 Start Qty: 50.00

Required Date: 04/04/2012 Req'd Qty: 50.00

Reference:

Accept

\*N9000040100\*

Setup Start \*NS1\*

Stop \*NS2\*

Cust Item ID:

Customer:

Approvals:

Process Plan: MLJ

QC:

Date: 12/03/21

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool # Plan  
Code Accept Reject  
Qty Qty Number Insp.  
Stamp

Draw Nbr

Revision Nbr

D2646

Rev C

100

\*100\*

Purchasing

Purchasing

PURCHASING

0.00

Memo

0.00

Issue P/O: 112-5-29 1-Spin as per Dwg D2646 2-Material release  
note required

OK 12/03/22 SC

110

\*110\*

Packaging

Packaging

Receive & Inspect for Damage & Mat'l Certs

0.00

Memo

0.00

Ensure Material Release Note is attached

Rec'd 4/12 (SC)

120

\*120\*

QC

Quality Control

QC6- Inspect dimensions to drawing

0.00

Memo

0.00

8/7/13

counts  
(SC)  
as per

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 81974

March-21-12 1:52:31 PM

\*81974\*

Page 2

Item ID: D2646

Revision ID:

Item Name: Aft Cap

Start Date: 21/03/2012 Start Qty: 50.00

Required Date: 04/04/2012 Req'd Qty: 50.00

Reference:

Accept

\*N900040100\*

Setup Start \*NS1\*

Stop \*NS2\*

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

130

\*130\*

Small Fab

Small Fab

Small Fab

Memo

1-Drill using DT8026 as per Dwg D2646.2-Open holes to .297 as per Dwg D2646.3-Deburr

0.00

0.00

10

Ø

FF  
12-05-14

140

\*140\*

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8/12/14

76

150

\*150\*

HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

Memo

0.00

10

76 12-5-15



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Work Order ID 81974

March-21-12 1:52:31 PM

**\*81974\***

Page 3

Item ID: D2646

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Aft Cap

Stop **\*NS2\***

Start Date: 21/03/2012 Start Qty: 50.00

**\*50\***

Cust Item ID:

Required Date: 04/04/2012 Req'd Qty: 50.00

**\*50\***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

**\*160\***

Powder coat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

0.00

OVEN TEMPERATURE:

Memo

START TIME:

FINISH TIME:

prime B 117319  
DelStee Blue B 121149  
Clear DelStee B 118093

AB 12-5-16

(24)

nhl 12-05-17

170

**\*170\***

QC

Quality Control

QC Inspect Part Finish

0.00

Memo

0.00

180

**\*180\***

Small Fab

Small Fab

Small Fab

0.00

Memo

0.00

Install inserts as per Dwg D2646

21 x 6 W 11x12



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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# Work Order ID 81974

March-21-12 1:52:31 PM

**\*81974\***

Page 4

Item ID: D2646

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Alt Cap

Stop **\*NS2\***

Start Date: 21/03/2012 Start Qty: 50.00

**\*50\***

Cust Item ID:

Required Date: 04/04/2012 Req'd Qty: 50.00

**\*50\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool # Plan Accept Reject Reject Insp.  
Code Qty Qty Number Stamp

190

QC5- Inspect part completeness to step on W/O

0.00

**\*190\***

QC

Memo

0.00

Quality Control

24  $\phi$  02/25/29

200

Identify as per dwg & Stock Location FP-2

0.00

**\*200\***

Packaging

Memo

0.00

Packaging

24  $\times$   $\phi$  Ill ulordze

210

QC21- Final Inspection - Work Order Release

0.00

**\*210\***

QC

Memo

0.00

Quality Control

12/5/30  $\phi$   
MK  
12-05-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

March-21-12 1:52:34 PM

Page 1

Work Order ID: 81974

\*81974\*

Parent Item: D2646

\*D2646\*

Parent Item Name: Aft Cap

Start Date: 21/03/2012

Required Date: 04/04/2012

Start Qty: 50.00

Required Qty: 50.00

## Comments:

IPP: G05.08.22Hole size revised in Step 5KJ/JLM  
IPP Rev:11 Changed Inserts 07-02-19 JLM  
IPP rev 1 changed inserts 07.06.11 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
ALS7-1032-130		Purchased	No			110	Each	1.952.000	2	100	48	21/03/12	
*AI S7-1032-130*													
Insert													

## Location

## Loc Qty

## Loc Code

ST280

237

11121269

117717

27

448

118966

22

119775

188

ST282

1715

119530

73

120181

1642

D2646P

Purchased

No

180

Each

0.0000

1

50

\*D2646P\*

Aft Cap

\*\*

012/19 50

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

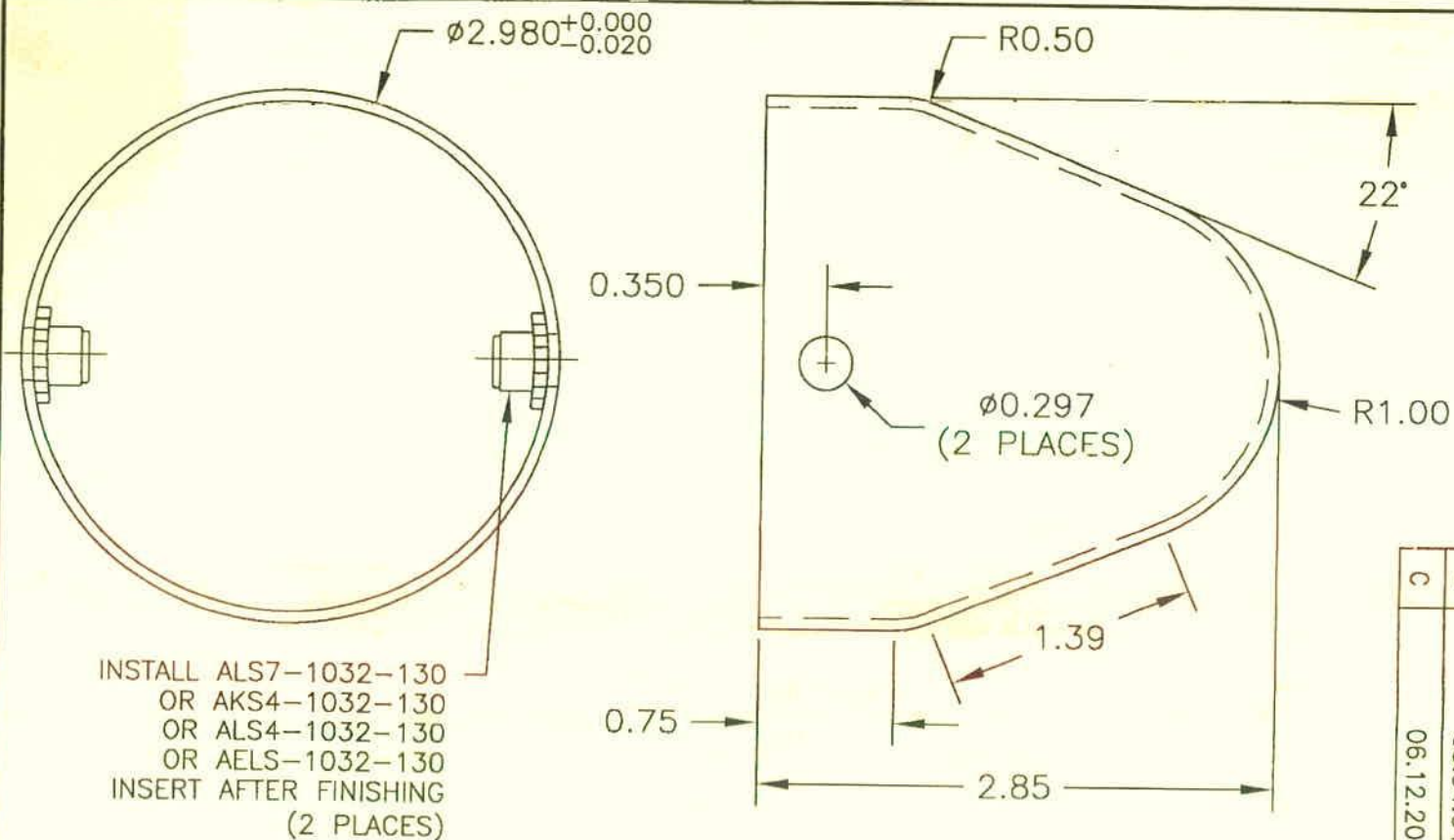
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**DART**

DESIGN	DS	DRAWN BY	PH	DART AEROSPACE USA, INC.	
				PORT HADLOCK, WA	
CHECKED	<del>PH</del>	APPROVED	<del>PH</del>	DRAWING NO.	REV. C
				D2646	SHEET 1 OF 1
DATE			TITLE		SCALE
06.12.20			AFT CAP		1:1
A	97.03.25		NEW ISSUE		
B	05.04.01		CHANGE TO CLOSED INSERTS		
C	06.12.20		CHANGE TO OPEN ENDED INSERTS		



D2646 AFT CAP

- 1) MATERIAL: ALUMINUM 1100-O 0.063 THICK (QQ-A-250/1)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

NO. 867751

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO16529

Purchase Order Date 3/22/12  
PO Print Date 3/22/12

Page Number 1 of 1

Order From :

VC-SIE001

SIEG'S MANUFACTURING LTD.  
6236 - 205 STREET  
LANGLEY, BC V2Y 1N7  
CA

Contact Name

Vendor Phone

604 530 7455

Vendor Fax

604 530 7490

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA



Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2646P	Aft Cap	4/06/12 Yes	50.00 Each	FedEx PI collect	\$6.4700	\$323.50

Special Inst: AS PER DWG D2646 REV. C  
B81974

PO Total:

\$323.50

Change Nbr: 1

Change Date: 3/22/12

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





# Sieg's Manufacturing Ltd. Packing Slip

Metal Spinning & Metal Fabricating  
6236 205 Street  
Langley, BC, Canada V2Y 1N7  
Phone:(604)530 7455 Fax:(604)530-7490  
Check out our website: [www.siegsmf.com](http://www.siegsmf.com)

Packing Slip No.:  
Date:  
Page:

40588  
04/03/2012  
1

<b>Sold to:</b> DART AEROSPACE LTD. 1270 ABERDEEN STREET HAWKESBURY, ONTARIO K6A 1K7		<b>Ship to:</b> DART AEROSPACE LTD. 1270 ABERDEEN STREET HAWKESBURY, ONTARIO K6A 1K7	
<b>Order No.:</b> 16529		<b>Sold By:</b> KAULBARS, ARLA	
<b>Shipped By:</b> Fed EX		<b>Ship Date:</b> 04/03/2012	
<b>Tracking No.:</b>			

Item No.	Unit	Description	Quantity
D2646 P	Each	Aft Cap.	50
Comment:			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



# ThyssenKrupp Materials NA

Ken-Mac Metals Division



10/14/11

ThyssenKrupp

## CERTIFIED CHEMICAL & MECHANICAL ANALYSIS

Sold To: Copper & Brass Sales  
P.O. Box 5116

Ship To: Copper & Brass Sales  
404 Centura Court

Southfield MI 48086-5116

Spartanburg SC 29303

Customer PO Number: 5400111624-R01

Part No:

Ken-Mac Order/Item: 462255-1

Item Description : MA .06300 48.000 144.000 1100 0 MFREG MFREG

Heat/Lot: 28149601A Mill Tag No : 427978  
KM Stock No: 167291 Case Tickets: 752416, 752417, 752418

----- Chemical Composition ----->  
(Si) (Cu) (Fe) (Zn) (Al)  
.1100 .1300 .6000 .0100 99.15

----- Mechanical Composition ----->  
Tensile PSI: 13,500 Yield PSI: 5,900 Elongation: 30.0 Hardness as Shipped:

Heat/Lot: 28149601A Mill Tag No : 427979  
KM Stock No: 167292 Case Tickets: 752418, 752419, 752420

----- Chemical Composition ----->  
(Si) (Cu) (Fe) (Zn) (Al)  
.1100 .1300 .6000 .0100 99.15

----- Mechanical Composition ----->  
Tensile PSI: 13,500 Yield PSI: 5,900 Elongation: 30.0 Hardness as Shipped:

-----  
Total Pounds: 16,498

A Page 1

Bob Harley - Corporate Quality Manager

To the best of our knowledge, the information contained herein is true to all material presented.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries





Skana Aluminum Co  
Rolling Mill - Certified Metal

Certification of Properties and Analysis

Physical test: 112843 Aluminum Alloy: 1100 Temper: -O- Thickness:

.0630

Tested For: Copper and Brass Sales

6156 PO No: 5400107660-R01

Chemical	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Others	Al
Min Range	..	..	0.05	..	..	..	..	..	..	..	..
Max Range	.05 Si	+ Fe	0.20	0.05	..	..	..	0.1	..	0.05	..

Coil Ref. No.	1	2	3								
Tensile Strength KSI	13.03	13.12	12.81								
Yield Strength KSI	5.37	5.28	5.17								
% Elong. in 2 in.	31.70	31.70	31.60								
Coil Ref. No.											
Tensile Strength KSI											
Yield Strength KSI											
% Elong. in 2 in.											
Coil Ref. No.											
Tensile Strength KSI											
Yield Strength KSI											
% Elong. in 2 in.											
Coil Ref. No.											
Tensile Strength KSI											
Yield Strength KSI											
% Elong. in 2 in.											
Coil Ref. No.											
Tensile Strength KSI											
Yield Strength KSI											
% Elong. in 2 in.											

C  
1764113

Remarks

Tested By: NH

Certified Date: 22 Sep 2011

NH .063 X 48.000 MF 3/3

ITEM# ALFLR01226

MEETS/EXCEEDS ASTM B209-10 SPECS

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



**Skana Aluminum Company**  
**Rolling Mill - Certified Metal**  
**Certification of Properties and Analysis**

Physical test: 112843 Aluminum Alloy: 1100 Temper: -O- Thickness: .0630

Tested For: Copper and Brass Sales

6156 PO No: 5400107660-

Chemical	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Others	Al
Min Range	..		0.05	..	..	..	..	..	..		
Max Range	.95 Si	+ Fe	0.20	0.05	..	..	..	0.1	..	0.05	

1	13.03	5.37	31.70	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Others
				.195	.484	.087	..	..	..	..	..	..	..

Al

BAL

2	13.12	5.28	31.70	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Others
				.165	.045	.038	..	..	..	..	..	..	..

Al

BAL

3	12.81	5.17	31.80	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Others
				.162	.438	.082	..	..	..	..	..	..	..

Al

BAL

Remarks

Tested By: NH

Certified Date: 22 Sep 2011

NH .063 X 48.000 MF 3/3

ITEM# ALFLR01226

MEETS/EXCEEDS ASTM B209-10 SPECS

Thursday, September 22, 2011

MADE IN THE U.S.A.

QF 824-1-2

Page 1 of 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



# ThyssenKrupp Materials NA

Ken-Mac Metals Division



10/14/11

ThyssenKrupp

## CERTIFIED CHEMICAL & MECHANICAL ANALYSIS

Sold To: Copper & Brass Sales  
P.O. Box 5116

Ship To: Copper & Brass Sales  
404 Centura Court

Southfield MI 48086-5116

Spartanburg SC 29303

Customer PO Number: 5400111624-R01

Part No:

Ken-Mac Order/Item: 462255-1

Item Description : MA .06300 48.000 144.000 1100 0 MFREG MFREG

Heat/Lot: 28149601A Mill Tag No : 427978  
KM Stock No: 167291 Case Tickets: 752416, 752417, 752418

### ----- Chemical Composition -----

(Si)	(Cu)	(Fe)	(Zn)	(Al)
.1100	.1300	.6000	.0100	99.15

### ----- Mechanical Composition -----

Tensile PSI: 13,500 Yield PSI: 5,900 Elongation: 30.0 Hardness as Shipped:

Heat/Lot: 28149601A Mill Tag No : 427979  
KM Stock No: 167292 Case Tickets: 752418, 752419, 752420

### ----- Chemical Composition -----

(Si)	(Cu)	(Fe)	(Zn)	(Al)
.1100	.1300	.6000	.0100	99.15

### ----- Mechanical Composition -----

Tensile PSI: 13,500 Yield PSI: 5,900 Elongation: 30.0 Hardness as Shipped:

Total Pounds: 16,498

A Page 1

Bob Harley - Corporate Quality Manager

To the best of our knowledge, the aforementioned material conforms to all applicable specifications.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



15-A-B  
ACCREDITED  
#L2068-1

ALERIS ROLLED PRODUCTS, LLC  
C/O ALERIS ROLLED PRODUCTS, INC.  
P O BOX 480  
LEWISPORT, KENTUCKY 42351

ALUMINUM CERTIFICATION SHEET

THIS IS TO ADVISE THAT THE MATERIAL PRODUCED FOR YOUR ORDER  
CONFORMS TO THE SPECIFICATIONS OUTLINED BY THE ALUMINUM ASSOCIATION.  
MATERIAL WAS MELTED, ROLLED, AND PROCESSED IN THE USA.  
THE TEST RESULTS RELATE ONLY TO THE SKID IDENTIFIED BELOW:

SKID : 427978  
ORDER: 00337316-000001  
LOT : 281496  
SUBLOT : 28149601A  
DESCRIPTION: ALLOY 1100  
TEMPER O  
SIZE .0630 X 48.0000  
CUSTOMER: THYSSENKRUPP MATERIALS, NA  
17901 ENGLEWOOD DRIVE  
CLEVELAND  
PO # : 124138  
PART # :  
OH4413J

SPECS: ASTM B209

DATE TESTED: 09/13/2011

CHEMICAL COMPOSITION - ASTM B1251

SI	FE	CU	MN	MG	CR	ZN	TI	GA	V	AL
.11	.60	.13	.00	.00	.00	.01	.00	.00	.00	99.11

DATE TESTED: 10/02/2011

MECHANICAL PROPERTIES - ASTM B557

RESULTS	T42 RESULTS	T62 RESULTS
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ULTIMATE TENSILE STRENGTH MIN (KSI)	13.5	
ULTIMATE TENSILE STRENGTH MAX	13.6	
ULTIMATE TENSILE STRENGTH AVG	13.6	

YIELD STRENGTH MIN (KSI)	5.9	
YIELD STRENGTH MAX	6.4	
YIELD STRENGTH AVG	6.2	

ELONGATION MIN %	30	
ELONGATION MAX %	30	
ELONGATION AVG %	30	

NET SKID WEIGHT: 8,422

CHEMICALS CERTIFIED: /S/ SUSAN MUDD, QUALITY SYSTEMS SUPERINTENDENT  
MECHANICALS CERTIFIED: /S/ SUSAN MUDD, QUALITY SYSTEMS SUPERINTENDENT

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries